

### ABSTRACT

Methods to predict a patient's responsiveness to 5-HT<sub>3</sub> receptor antagonists are disclosed. The methods allow a clinician to predict a patient's responsiveness to 5-HT<sub>3</sub> receptor antagonists by determining the correlation that exists between a genotype in the promoter region of the gene encoding a serotonin transporter protein and patient response to 5-HT<sub>3</sub> receptor antagonist therapy. In addition, methods to treat patients suffering from diarrhea-predominant irritable bowel syndrome and methods to identify a patient population for inclusion in a 5-HT<sub>3</sub> receptor antagonist clinical trial are disclosed.

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